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AUTHOR Osher, Trina; And Others

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ABSTRACT

This resource paper describes two recent studies and one report on special education costs and the methodology used in their analyses. Each study and its data source are summarized with a short discussion on the quality of the data and its usefulness and limitations in generating reliable cost estimates for special education. The paper summarizes information from the following three sources: (1) the examination of special education costs presented in the "12th Annual Report to Congress on the Implementation of the Education of the Handicapped Act," U.S. Department of Education (1990); (2) "Special Education: Views from America's Cities" prepared by the Council of the Great City Schools (1988); and (3) "Patterns in Special Education Delivery and Cost" prepared by Decision Resources Corporation (1988). A section on terminology and definitions is followed by a section which looks at each of the three sources for cost determination. A concluding discussion notes that the three reports draw different conclusions. A table compares results of the three studies for the 1985-86 school year. The paper stresses that distinguishing between the concepts of "total cost" versus "excess cost" is central to the correct use and interpretation of a cost ratio estimate. The Decision Resources Corporation report is seen as yielding the most accurate cost estimates and ratios. This study estimates "excess costs" incurred by the student with disabilities as ranging from 0.9 to 9.6 times the average per pupil expenditure, depending upon the student's special education program. The diversity of local conditions is seen as making any system for evaluating special education costs difficult. (DB)

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A RESOURCE PAPER ON THE RELATIVE COST OF SPECIAL EDUCATION

By
Trina Osher, John George, and Patricia Gonzalez
Project FORUM at NASDSE

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PREFACE

Establishing a definitive cost for special education programs and services has remained an elusive task despite several recent studies. Nevertheless, State and Federal policy makers, administrators, and planners continue to ask, "What does special education actually cost?" The purpose of this paper is to assist readers in understanding recent estimates on the cost of special education derived from three reports on this topic. It is hoped that a greater understanding of the difficulties associated with determining special education costs will result in better informed decisionmaking based on the estimates and data provided in these reports. This resource paper describes two recent studies and one report on special education costs and the methodology used in their analyses. Each study and its data source are summarized with a short discussion on the quality of the data and its usefulness and limitations in generating reliable cost estimates for special education. This resource paper summarizes information from the following three sources:

- The examination of special education costs presented in the 12th Annual Report to Congress on the Implementation of the Education of the Handicapped Act, U.S. Department of Education (1990);
- Special Education: Views from America's Cities prepared by the Council of the Great City Schools (1988); and
- Patterns in Special Education Delivery and Cost prepared by Decision Resources Corporation (1988).

SPECIAL NOTE: This resource paper uses ratios that describe special education costs in relation to general education costs. In order to describe accurately the systems used to generate these ratios, it is sometimes necessary to cite exact dollar amounts from the studies themselves. When exact dollar amounts are used, it is with the understanding that they are not reflective of today's economy.

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TERMINOLOGY AND DEFINITIONS

The literature pertaining to special education costs is replete with commonly used, but imprecise terms, such as cost, expense, and excess. Contributing to this ambiguity are a multiplicity of definitions for the same term. For example, the term "excess costs" commonly refers to the added costs of providing special education and related services to students with disabilities; but the methods of calculating this cost differ widely. Furthermore, some calculations of special education cost compare gross special education expenditures with gross general education expenditures; others add a prorated amount of general education expenditures, presumed to be the cost of general education services consumed by students with disabilities, to the actual special education expenditure. Comparing the special education cost calculated by one study with that calculated by another must take into consideration the method used to generate each figure.

The specific level to which any line item cost can be broken down is a function of the accounting system used by the reporting agency. Regardless of the detail of district level accounting systems, costs are usually aggregated into broad categories when collected at the State or national level. It is these aggregated figures which are generally used to generate estimates of the average cost of educating a student. The further the analysis moves from the special education student, the less specific it can be for predicting costs on a case-by-case basis. The figures from the studies reported in this resource paper are useful only for broad planning purposes at the district or State level. Such figures are inapplicable when estimating the cost of services for an individual student.

Most students with disabilities spend some portion of their school day in general education classes or in other school activities such as assembly, lunch, or recess that are under the supervision of the general education administration. That portion of the student's school day spent in special education classes or receiving related services is *in lieu* of rather than in excess of general education. To be more precise, the real or "total cost" of educating

a student with a disability should be the sum of the expenditures for the time spent receiving special education in general education classes, special schools, special classes, or resource rooms; plus, the time spent in general education classes; plus, a portion of the administration of general education activities in which the student participates; plus, the cost of related services and specialized instructional equipment provided for that student. For some students there are also costs for providing special transportation and additional personnel such as interpreters or aides. There also are costs for staff training and the administration of the special education process, including costs for assessments and implementing procedural safeguards not required for students in the general education program. The comparability and reliability of "excess cost" calculations are influenced by the extent to which the above components are included. To avoid confusion, descriptions are provided below for the terms used in this resource paper.

Average Per Pupil Expenditure (APPE) is the sum of the costs for all education-related instruction, administration, and transportation divided by the average daily attendance of the educational unit incurring the costs. Capital expenses are not included. The National Center for Education Statistics (NCES) collects enrollment and fiscal data for students enrolled in public schools from which it annually calculates a statistic it calls the "current expenditure per pupil in average daily attendance". The term "average per pupil expenditure" is commonly used to refer to this statistic. The NCES statistic includes costs for students with disabilities who are enrolled in public schools. Students with disabilities who are enrolled in non-public schools are not included in this figure.

Cost of Special Education refers to the disbursements incurred for the implementation of Individualized Education Programs (IEPs). This includes special education instruction and related services. It does not include the cost of general education participation by students with disabilities. It is unclear

from the data whether or not the studies described in this paper included expenditures for the administration of special education programs, child find, and the initial evaluation and identification of students with disabilities, or the implementation of procedural safeguards required under the Individuals with Disabilities Education Act (IDEA, formerly known as EHA). A related term that can be used interchangably with "cost of special education" is "excess cost". "Excess cost", like the "cost of special education", refers to the difference between expenditures for a student with disabilities and expenditures for a typical student and may be based either on "total cost" or "instructional cost".

Total Cost refers to all expenses incurred for the education of a student. This includes expenses for program administration as well as the provision of instruction regardless of setting. For a student with disabilities, a total cost figure includes the additional costs incurred for the implementation of the IEP. The term "total cost" can refer to either a student with a disability or a typical student. "Total cost" also can refer to an individual student or a group of like students.

Instructional Cost means expenditures attributable to the activities of teaching or classroom instruction only. The term does not include expenditures for administration, pupil support such as related services, guidance, health services, transportation, or capital outlays. The term can be applied to students with disabilities, in which case it is the "special education instructional cost".

SOURCES FOR COST DETERMINATION

Twelfth Annual Report to Congress, U.S. Department of Education

Since 1983, States and territories have submitted annually to the Office of Special Education Programs (OSEP) a report of Federal, State, and local expenditures for special education and related services.[1] The Twelfth Annual Report to Congress (ARC) aggregated and reported data submitted by the States for the 1985-86 school year. Table 1 displays these data.

Table 1

FEDERAL, STATE AND LOCAL FUNDS EXPENDED FOR SPECIAL EDUCATION AND RELATED SERVICES FOR THE 1985-86 SCHOOL YEAR

	Federal	State	Local	Total
Special Education	869,287,952	6,922,048,058	3,675,220,870	11,466,556,880
Related Services	269,853,173	1,718,495,374	1,050,991,894	3,039,340,441
Total*	1,253,905,252	9,288,974,276	5,419,950,598	15,962,830,126

*Column totals will not sum because some States could not provide separate counts for special education and related services and only reported total funds expended.

During the 1985-86 school year, States reported serving 4,370,244[2] students with disabilities, ages 3-21. The average per pupil expenditure for special education and related services derived by dividing the $15,962,830,126 spent on the 4,370,244 students served is reported in the 12th Annual Report to Congress as $3,652. The 12th Annual Report to

[1] States may estimate the expenditures for related services and, if the State is sufficiently large, it may use sampling procedures rather than collect financial data from every district.

[2] U.S. Dept. of Education, Ninth Annual Report to Congress, Table EA1, p.E-3.

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Congress describes this figure as "the excess costs of providing special education . . . above and beyond the costs of providing regular education to non-disabled students."[3] Using the definitions developed for this paper, the $3,652 represents an estimate of the average per pupil "cost of special education".

The "cost of special education" derived from State reported data is considered to be a rough estimate of the actual costs. Other than excluding the costs of capital outlay and and general education programs and services, there are no federal standards to guide States in selecting budget line items for inclusion in their reports of expenditures for special education and related services. Since accounting systems vary and States are permitted to use their own discretion in determining what constitutes special education expenditures, there is no assurance that data reported are comparable from State to State. Further compounding the inaccuracy of these figures is the additional variability in the discretion permitted by States to local education agencies in reporting their expenditures.

Though the accuracy and validity of the "excess cost" figure reported in the 12th Annual Report to Congress can and has been questioned, it remains one of the few State-by-State sources of information available for determining the cost of providing special education and related services to students with disabilities. By itself, the $3,652 figure is not very useful. In order to create a useful tool for evaluating or predicting the cost of providing special education to pupils with disabilities, it is necessary to attempt a comparison of this figure with some measure of the cost of providing a general education to their nondisabled peers. The National Center for Education Statistics calculated the 1985-1986 school year "average per pupil expenditure" to be $3,752[4]. By adding the average per pupil expenditure (as determined by NCES) to the excess cost of special education as reported

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[3] U.S. Dept. of Education, Twelfth Annual Report to Congress, p.146.

[4] NCES, p.133.

in the 12th Annual Report to Congress, and dividing the sum by the NCES figure on average per pupil expenditure we can establish a ratio that compares the "total cost" of educating a student with disabilities with the average cost of educating a student in general education.

Figure 1

FORMULA FOR THE "TOTAL COST" RATIO

$$\frac{\text{APPE} + \text{Sp.Ed.}}{\text{APPE}} = \frac{3{,}752 + 3{,}652}{3{,}752} = 1.97{:}1 \text{ Ratio}$$

Unfortunately, using this procedure does not yield an entirely satisfactory ratio because it fails to consider that expenditures for special education and related services are *in lieu* of, not in addition to, expenditures for instruction in the general education program. Because the source data from which the NCES "average per pupil cost" is derived includes some, but not all students with disabilities, it is also not a "clean" comparison between general and special education. Nevertheless, we can use these data to offer a cautious estimate that on average the "total cost" of educating students with disabilities is almost twice the "total cost" of educating students in general education.

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Special Education in America's Cities, Council of the Great City Schools

In 1988, the Council of Great City Schools issued a report describing special education in America's cities. The 33 participating urban school districts were asked to submit per pupil expenditures for special education and general education for the years 1985 through 1987. Directions were given for calculating per pupil dollar expenditures based on costs associated with direct instruction, related services, and administration for either special education or general education. Costs for transportation, debt services, and capital improvements were excluded. The range and average costs for all three years are presented in Table 2. The average per pupil expenditure for special education in 1985 ranged from a high of $11,892 per pupil to a low of $2,005. The average of the reported costs was $4,438. By 1987 the highest cost reported had dropped to $11,035 and the lowest had risen slightly to $2,015, thus narrowing the spread of the range by $867 (9%). However, the average of the reported costs for special education in 1987 increased by $874 (20%) to $5,312. In comparison, the average of the reported costs for general education from 1985 to 1987 increased by $517 (17%). The urban districts reporting the highest or lowest expenditures in 1985 were not necessarily the same districts reporting the highest or lowest expenditures in 1987.

Table 2
ANNUAL PER PUPIL DOLLAR EXPENDITURES FOR SPECIAL AND GENERAL EDUCATION PROGRAMS IN 33 URBAN SCHOOL DISTRICTS

	Special Education			General Education		
Range	1985	1986	1987	1985	1986	1987
High	11,892	10,530	11,035	4,550	4,933	5,332
Low	2,005	2,164	2,015	1,033	1,076	1,946
Average	4,438	4,882	5,312	3,041	3,273	3,558

Like the data reported by States in the 12th Annual Report to Congress, there is wide variability in the urban district data, making the comparability between the districts questionable. The Council of Great City Schools attributes the lack of consistency in the data collection and reporting procedures employed by these districts to differences among State and local funding formulas, starting and ending dates for fiscal years, and the assignment and distribution of costs to various program budgets.

The formula in Figure 1 used to determine ratios [(APPE + Sp.Ed.) / APPE] also can be applied to the data collected by urban school districts to generate a ratio of the cost of providing education to students with disabilities to that of general education students in urban environments. Applying the formula to the data in Table 2 produces a ratio of approximately 2.5:1 for each of the three years studied by the Council of Great City Schools. Table 3 displays the costs and resulting ratios for 1985 through 1987.

Table 3
RATIO OF THREE YEARS OF
SPECIAL EDUCATION COSTS TO
GENERAL EDUCATION COSTS FOR
33 URBAN SCHOOL DISTRICTS

	Special Education	General Education	Ratio
1985	4,438	3,041	2.46:1
1986	4,882	3,273	2.49:1
1987	5,312	3,558	2.49:1

As was discussed with regard to the 12th Annual Report to Congress and the NCES average per pupil expenditure, the ratios are misleading because the methodology fails to pro-rate the cost of general education, thereby recognizing that special education is provided *in lieu* of general education not in addition to it. However, it does allow us to calculate "total cost" figures that can be used to compare the data from the Annual Report to Congress with that from the Council of the Great City Schools. In 1985, for example, the "total cost" of educating a student with disabilities was $7,479 for the 33 urban districts included in the Great Cities' study. This figure was obtained by summing the costs of

special education and the costs of regular education for 1985 as provided in Table 3. Similarly, by summing the 1985-86 APPE figure from the National Center for Educational Statistics ($3,572) with the excess cost figure reported in the 12th Annual Report to Congress ((3,652), a "total cost" of $7,404 was calculated for the nation as a whole. While the "total cost" figures from these two reports differed by only 1%, there was a 25% difference between the ratios of 1.97:1 and 2.46:1 using the same cost figures.

Further comparison of the two data sets reveals additional disparities. In 1985, the national average cost of educating a general education student was 23% **greater** than the urban districts' average cost. In contrast, the national average cost of providing special education and related services for a student with disabilities was 26% **less** than the urban districts' average cost. Why was special education more expensive in urban settings when regular education was less expensive? It would be too difficult to explain these dramatic differences without knowing exactly what expenditures from these 33 urban districts were included in the data reported in the 12th Annual Report to Congress or reported to the National Center for Education Statistics. However, given what is known about how the data were collected, it is likely that the differences can be traced to the assignment of specific line item expenses to special or general education. It seems plausible that some services considered to be special education in the Great Cities' study were not included in the special education expenditures reported in the 12th Annual Report to Congress.

Patterns In Special Education Service Delivery and Cost
Decision Resources Corporation

In 1988, Decision Resources Corporation (DRC) published Patterns in Special Education Service Delivery and Cost. The U.S. Department of Education's Office of Special Education Programs commissioned this study and reported portions of it in both the 9th and the 11th Annual Report to Congress. This study gathered detailed information about resources, pricing, and pupil enrollments for all special and general education programs during the 1985-86 school year. DRC constructed a stratified sample of 60 school districts in 18 states to produce national estimates of costs and services. By carefully designing its survey instrument, DRC was able to employ a methodology that minimized differences in budgeting and accounting systems and left little room for districts to decide what items to report and in what categories to report them. Therefore, comparability of data from district to district is fairly high. This study also examined variability in costs based on different types of service delivery systems, ages of students, and categories of disability. The DRC study incorporated a strategy for prorating the general education expenses attributable to the "total cost" of educating students with disabilities based on the actual time they spent in general education programs.

From the data collected in its survey, DRC estimated that a "total of $16 billion in public funds, or an average of $3,649 for each student [with disabilities] was spent on special education programs during the 1985-86 academic year."[5] DRC calculated an average per pupil expenditure (all expenditures combined including those for special education) of $3,395 for the same school year.[6] Both of these figures are very similar to those based on the data reported in the 12th Annual Report to Congress and by the National Center for Education Statistics for the same time period. DRC estimated the average cost of educating

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[5] Moore, et.al., p.65.

[6] Moore, et.al., p.98.

a student full time in regular education at $2,780 and adjusted this amount to reflect the actual time spent in general education for students assigned to five different types of special education programs. The DRC cost figures arranged by program type[7] are displayed in Table 4.

Table 4
AVERAGE PER PUPIL EXPENDITURE AND RATIOS FOR SPECIAL AND GENERAL EDUCATION BY TYPE OF PROGRAM

Program Type	Special Education	General Education[a]	Combined Special & General Education	Per Pupil Excess Cost[b]	Ratio
Resource	2,463	2,780	5,243	2,463	1.9:1
Self Contained	5,566	1,347	6,913	4,133	2.5:1
Preschool	4,750	973	5,723	2,943	2.1:1
Residential	29,108	389	29,497	26,717	10.6:1
All Combined	3,640	2,696	6,335	3,555	2.3:1

[a] Portion of general education expenditures allocated to special education students while they are being served within the general education program.

[b] Combined general and special education costs (Column 3) minus the average per pupil cost for a regular education student, estimated to be $2,780 for the 1985-86 school year.

According to the data and procedure used by DRC the cost of educating a pupil with disabilities, depending on the student's special education placement, ranged from 10.6 to 1.9 times the cost of educating a general education student. The ratio of the "total cost" of educating a student with disabilities to the "total cost" of educating a general education student for all types of programs combined was 2.3:1. This ratio, which uses a consistent methodology, falls between those previously discussed in this resource paper.

[7] Moore, et.al., pp.104-108.

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DISCUSSION

The three reports on special education cost data summarized in this resource paper draw different conclusions. In part this is due to the nature of the data sources used in each study, the methods of collecting financial information, and the different strategies used to arrive at an average per pupil special and general education cost. As discussed above, some of the differences also can be attributed to the quality of the data collected and analyzed in each study.

Table 5
A COMPARISON OF RESULTS FROM THREE SPECIAL EDUCATION COST REPORTS - 1985-86 School Year

	Excess Cost of Special Education	Cost of General Education (APPE)	"Total Cost" of Education for Student Disabilities*	Ratio of "Total Cost" of Special Education to General Education Cost for a Typical Student
12th ARC & NCES	3,652	3,752	7,404	1.97:1
Great City Schools	4,438	3,041	7,479	2.46:1
DRC	3,649	2,686	6,335	2.36:1

* "Excess cost" plus the average per pupil expenditure (APPE).

While the costs are given in terms of average per pupil expenditures, they are not truly indicative of the costs for an individual student. The set of costs and ratios derived by DRC demonstrates the wide range of expenses associated with different configurations of service for students with disabilities. Both the costs and the ratios from these studies are useful only for projecting expenditures for large numbers of students.

The concept of "total cost" versus "excess cost" is central to the correct use and the interpretation of a cost ratio estimate. It is important to remember that regardless of the study, all the ratios discussed in this resource paper refer to the "total cost" of providing special and general education to a student with disabilities. These figures and ratios are greater than those for the "excess cost" of providing special education alone. To convert the "total cost" ratio to a ratio for "excess cost', it is necessary to subtract the general education

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expenditure from the "total cost" of educating a student with disabilities. This reduces each ratio by "1". Based on State data reported in the 12th Annual Report to Congress, the average "excess cost" of providing special education and related services for a student with disabilities is about equal to the average cost of providing general education to a typical student. Therefore, using the same data, the average "total cost" of educating a student with disabilities is double that of educating a typical student.

Because of its standardized data collection methods, and in spite of its limited sample, the DRC study appears to yield the most accurate cost estimates and ratios. Furthermore, by providing separate ratios for five special education program options, the results of the DRC study can be used in combination with a school district's pattern of student placement to project special education costs more accurately than using the ratios calculated from the 12th Annual Report to Congress or the Great Cities' study.

Estimates of "excess cost" from the DRC study range from 0.9 to 9.6 times the average per pupil expenditure depending upon the student's special education program. The autonomy that States and local school districts have over their budget and accounting systems makes it virtually impossible to collect data that are comparable and useful when aggregated at a national level. Consequently, it has been suggested that reliable generalizations about the cost of special education cannot be made until there is a uniform basis for describing them. In the future, any proposed system for evaluating special education costs will have to take into consideration the diversity of local conditions influencing the market price of educational goods and services, and the ways in which local communities govern their educational systems.

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